

# CHAPTER 27 - New Public Road Connections

## Table of Contents

CHAPTER 27 - New Public Road Connections .....	27-3
ARTICLE 1 - General .....	27-3
Responsibility .....	27-3
Protection of State Highways.....	27-3
Freeway (and Controlled Access Highway) Agreements.....	27-4
Definitions Pertaining to Access Control.....	27-4
Statutes Require CTC Consent to New Public Road Connections.....	27-4
Project Category .....	27-4
Definitions .....	27-4
S&H Code - Definitions.....	27-5
ARTICLE 2 - Policy.....	27-6
General.....	27-6
Public Road.....	27-6
Public, Private Road Determination.....	27-6
Engineering & Financing .....	27-7
Early Confirmation .....	27-7
Funding for New Connections .....	27-7
Compensation for Value Enhancement.....	27-8
Access Control Policy.....	27-8
Project Development Process .....	27-9
Public Road Connection Widths are Not Specified .....	27-9
Existing Road as Frontage Road.....	27-9
CTC Imposed Conditions .....	27-9
Private Roads and "Stubs" .....	27-10
Public Road Maintenance .....	27-10
"Other Public Agency Highway of Any Kind" .....	27-10
Other Public Agency Road Connections.....	27-10
Violations of Private Access Openings to Expressways .....	27-10
Consider Future Land Use in Initial Design.....	27-11
ARTICLE 3 - Approvals .....	27-11
Local Construction Prior to Freeway Agreement.....	27-11
CTC Approval Not Required:.....	27-12
Early Confirmation of Feasible Proposals .....	27-13
CTC Approval Required:.....	27-13
New Connection Report on Expressways .....	27-14
FIGURE 1 - Existing Separations and Ramps.....	27-15
FIGURE 2 - Existing T-Intersection at Grade: Convert to crossroad. Existing T-Interchange: Add crossroad to other side. ....	27-16
FIGURE 3 - Existing Interchange .....	27-17
FIGURE 4 - Convert Existing Diamond to Split Diamond .....	27-18
FIGURE 5 - Existing Interchange: Add ramps, but no new service.....	27-19
New Connections to Freeways.....	27-20
ARTICLE 4 - Steps to CTC Action on a New Connection.....	27-20
Follow Regular Project Development Process.....	27-20
Engineering Feasibility and Financing.....	27-20
Request to CTC.....	27-20

CTC is Responsible Agency Under CEQA.....	27-21
Expressways.....	27-21
New Freeway Interchanges .....	27-21
Inclusion of New Interchange with State Proposal .....	27-21
ARTICLE 5 - Approval of New or Revised Interchanges .....	27-22
Application .....	27-22
Conceptual Approval Conditions .....	27-22
PSR Content.....	27-23
Exceptions to Spacing Requirements.....	27-24
Interstate Freeways .....	27-25
Right of Way Changes .....	27-25
ARTICLE 6 - CTC Funding Policy for Interchanges .....	27-25
Purpose of Policy .....	27-25
General CTC Interchange Funding Policy .....	27-26
Priority Versus Cost Sharing.....	27-27

# CHAPTER 27 - New Public Road Connections

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## ARTICLE 1 - General

### **Responsibility**

Caltrans is responsible for improving and preserving State highways to serve interregional traffic on the State's transportation corridors. To this end, access control rights are acquired and connection points are kept to a minimum on freeways and expressways. New public road connections to these facilities are permitted only after careful analysis to determine that no detrimental effect will occur that would diminish facility operation.

Much of the responsibility for securing approval of a new public road connection to a freeway rests with the local agency. The requesting local agency should be fully informed to ensure common understanding of requirements for California Transportation Commission (CTC) approval.

The environmental studies and documentation for the local agency's new public road should cover the traffic impacts on the State highway. It is stressed that the local agency understand that the connection should be covered by the local agency's environmental document. The local agency should be informed in writing that the features of the proposed new local public road, the connection to the State freeway, and the proposed environmental type under CEQA and NEPA must be acceptable, in concept, to Caltrans.

FHWA conceptual approval of a new public road connection or modification to an interchange on an Interstate freeway must be obtained prior to notifying the local agency of acceptance. See Article 5 for the content of the request to FHWA.

### **Protection of State Highways**

The California Freeway and Expressway (F&E) System has been constructed with a large investment of funds in the right to control access, in order to insure the safety and operational integrity of the highways. The legislative intent for requiring CTC consent to new public road connections to freeways and expressways is to ensure complete evaluation of all proposed revisions to access control so that current and future traffic safety and operations are not compromised, to protect the investment in any improvements made, and to permit the ultimate development of a full freeway or an expressway when traffic and other conditions require.

S&H Code Section 250 states it is the intent that the California F&E System be completed with provision for the access control necessary to preserve the utility of the constructed facility. S&H Code 254 requires such access control as is necessary to

protect any investment in improvements in an access controlled highway for the purpose of facilitating the ultimate development of a full freeway or an expressway.

## **Freeway (and Controlled Access Highway) Agreements**

New public road connections require an agreement with the local agency having jurisdiction over the public road proposed for connection to a State access controlled highway. Chapter 24 discusses these agreements.

## **Definitions Pertaining to Access Control**

Statutes define "freeway", "controlled access highway" and "expressway". The term "controlled access highway" is defined in S&H Code Section 23.5 for the purposes of processing expressway route adoptions, denominating freeways as controlled access highways at sensitive locations, and processing the CTC approval of new connections to expressways. On expressways, Caltrans substitutes the term "controlled access highway" for "freeway" in agreements with local agencies.

The term "expressway" is used in the *Highway Design Manual* (HDM) for highway design purposes. Any reference to an "expressway" in this manual or any other manual has the definition of a "controlled access highway" attached to it.

## **Statutes Require CTC Consent to New Public Road Connections**

Sections 23.5, 100.2 and 100.3 of the S&H Code provide that CTC consent is required for public road openings or connections with freeways. These sections authorize Caltrans to enter into Freeway Agreements providing for the closing of city streets, county highways or county roads. Freeway agreements must show CTC approved new connections of new city streets or new county highways and roads.

Under the language of Section 100.3, a freeway comes into existence "for all purposes of Section 100.2" immediately upon adoption of the freeway declaration by the CTC.

## **Project Category**

A new public road connection to a freeway or an expressway provides service to the general public. A new public road connection that is approved prior to construction of the access controlled facility is a major design feature of a Project Development (PD) Category 1 project. Once the access controlled facility has been constructed, a project to construct a new public road connection would usually be a PD Category 3.

## **Definitions**

### **Public Road**

For purposes of implementing new public road connection policy, city streets, county roads, and public highways are collectively referred to as public roads. A "public road" is defined to include: (1) a road to be maintained for general public use having dedicated rights of way or easements and serving multiple property ownerships; or (2) a road to be

maintained at public expense, which is to connect to a public agency facility serving the general public, such as a State park, a county government center, a city landfill, an Indian reservation, etc.

### **Private Road**

A "private road" connection to the State highway is any connection other than a "public road" connection. A private road connection includes a "stub" connection, which is a publicly used access opening, usually less than 0.4 km in length, serving privately owned property that is, or that is planned to be, used for commercial business or other development (shopping center, manufacturing plant, industrial park, condominium complex, etc.). These "stubs" are considered private road connections for which compensation is to be obtained from the landowner(s) because they receive the preponderance of benefits. This definition does not preclude a city or county from having jurisdiction and maintenance responsibility over a proposed "stub" connection, but such would not relieve the property owner(s) of the payment of compensation for the private access rights to be acquired.

### **Access Opening**

The term "access opening" applies to openings through the right of way line that serve abutting land ownerships whose remaining access rights have been acquired by the State (also see the definition for "private road"). Access openings are used only on expressways. See HDM Index 205.1. On freeways, direct access to the freeway from private property is prohibited without exception. See HDM Index 104.1 General Policy - Control of Access.

## **S&H Code - Definitions**

The following definition is copied verbatim from the S&H Code:

### **"Freeway" and "Expressway"**

**257.** For the purpose of this article only (Article 2 California Freeway and Expressway System, Streets and Highways Code), and to distinguish between the terms "freeway" and "expressway", the word "freeway" shall mean a divided arterial highway for through traffic with full control of access and with grade separations at intersections, while the word "expressway" shall mean an arterial highway for through traffic which may have partial control of access, but which may or may not be divided or have grade separations at intersections.

Other pertinent definitions from the S&H Code Sections are repeated verbatim, in Chapter 24, Article 1, of this manual:

- **"Freeway"** (and "controlled access highway") [Section 23.5]
- **Agreement to Close Street, etc.; Consent to Opening, etc.** [Section 100.2]
- **Resolution** (CTC resolution gives immediate freeway status) [Section 100.3.]

## ARTICLE 2 - Policy

### General

The Project Manager should ensure that the local agency has a complete understanding of State requirements and engineering standards at an early stage of project planning.

### Public Road

The definitions in Article 1 are used for purposes of implementing new public road policy. A local agency "public road" must clearly serve a public purpose, exceed 0.4 km in length, and should function as part of the local circulation element providing access to General Plan land uses.

The connection of the new public road must also meet freeway Design Standards for interchange spacing, as described in HDM Index 501.3, or it must have an approved exception. The proposal should conform to Caltrans Access Control Policy in HDM Topic 104 and Index 205.1. Better local service may be provided by frontage road, local public road or public street.

The language in S&H Code Section 100.2 suggests that, to be approved, the local agency's project development process for a proposed new public road connection to a State access-controlled highway should have progressed far enough that construction is expected to begin in the near future. A county road or city street that exists on paper in an approved subdivision map or as part of a master plan is considered to be nonexistent and should not be proposed as a new connection until such time as the road or street is included in an approved General Plan and until there is a funding commitment on a specific schedule for both the connection and a usable segment of the local road (exceeding 0.4 km in length).

### Public, Private Road Determination

One of the problem areas in administering policy on proposals for public road connections is to determine whether a road was a public road or a private road at the time the CTC made the freeway declaration. The fact that a roadway has never become a "county highway" or a "city street" would not necessarily prevent it from being a "public highway."

Tests can be applied to determine status as a "public highway". At the time of freeway declaration, (1) was the road being maintained at public expense? (2) was the road open for public use, regardless of who paid for maintenance? (3) Did the road serve more than one property owner, with at least one of the ownerships not abutting the adopted route? Note that it is not necessary that the road be paved to be considered a public highway.

The district project files should clearly document the facts used in making a public highway determination when otherwise not found as a public road of record.

## **Engineering & Financing**

As an initial step, the local agency and developer meet with Caltrans to determine engineering feasibility and to discuss the proposed construction financing. The local agency usually requests the new connection and makes a firm funding commitment by formal resolution, but this is usually adopted at the PSR stage. The initial discussions should confirm that there are no obvious engineering or financial conditions that would prevent continuation of the study or CTC new connection approval. The local agency should be informed that the CTC action in granting a new public road connection will set terms and conditions for the connection. This usually consists of specifying local-State responsibilities for right of way, construction costs, and the time frame for completion of construction of the new connection.

## **Early Confirmation**

Early in the process, the local agency should be given either a written reason why the proposal is unacceptable or a written confirmation that the proposal meets new public road connection policy. On expressways, the District Director gives an early response to a proposal by formal written reply, after considering a Project Study Report (PSR) - New Connection Report (see Article 3). This report is prepared and approved prior to making commitments to the requesting party. On freeways, the District Director sends a formal written confirmation after approval of a PSR.

Due to the requirements for CTC approval and because of Caltrans' responsibility for maintenance and tort liability, an Encroachment Permit by itself is unsuitable for submitting a request for a new public road connection.

## **Funding for New Connections**

New public road connection permission is granted by the district and the CTC. No processing cost is assessed to the requesting local agency for the project initiation document (PSR - New Connection) or for the CTC action. Caltrans will allow the requesting entity, at its cost, to prepare the report if Caltrans cannot complete the report in a timely manner. This follows statutory direction to Caltrans to implement and maintain the State Highway System in conformity with comprehensive statewide and regional transportation plans and the circulation and land-use elements of local agency General Plans.

Caltrans requires the local agency to pay all costs to construct a public road project to connect to an expressway (except that the PSR-New Connection Report preparation and the CTC permission is usually granted at no cost). The local agency usually obtains the funds as a condition of approval of a development, or through an assessment district, or from sales-tax provided by a voter approved measure, or from other suitable sources. The project is handled as a Special Funded State Highway project, regardless of cost.

For new public road connections to freeways, the local agency is responsible for construction costs in consideration of the CTC Funding Policy for Interchanges adopted April 26, 1984 (see Article 6). The details of funding and project features are usually determined by negotiation.

## **Compensation for Value Enhancement**

Compensation may be required by Caltrans when there is value enhancement to property adjacent to a public street that is proposed as a new public road connection to a freeway or expressway.

Compensation is required when a private ownership is granted access to an expressway, or when a private ownership is granted access to a local road through access control at a freeway.

No compensation is sought for incidental benefit to private and public property owners by a change in State access control due to a new public road connection. However, compensation for value enhancement is assessed by the State if the abutting private property owner(s) receive the preponderance of benefits from a new public road connection where the private property receives a value enhancement due to increased development potential. Examples of requiring compensation for value enhancement include, but would not be limited to, situations where open range land is subdivided into residential lots or when bare land is developed into a shopping center.

The local agency, the property owners or developers that propose a connection to a freeway or expressway should be informed of Caltrans policy of obtaining compensation for value enhancement.

## **Access Control Policy**

In the following paragraphs, access control policy from several sources is summarized.

On freeways, direct access from private property is prohibited without exception, see HDM Index 104.1. Abutting private property ownerships are served by frontage roads or streets connected to interchanges. All connections to freeways are by interchanges, see HDM Index 501.2. (When an original Freeway Agreement is executed to cover the route adoption, staged construction with an interim at-grade intersection is permissible until high traffic volumes, safety, or other factors justify construction of the interchange. However, for a proposed connection of a new public road to a full freeway, an interchange is required).

On expressways (which require a controlled access highway agreement as opposed to a Freeway Agreement), access from private property is permitted (HDM Index 205.1), but the size and number of openings are held to a minimum. Parcels that have access to another public road or street, as well as frontage on the expressway, are not allowed access to the expressway, see HDM Index 104.2.

If future conversion of an expressway to full freeway is possible, the freeway Advisory Design Standard for interchange spacing (see HDM Index 501.2) is implied for the spacing between public road at-grade intersections.

Frontage roads on freeways and expressways are justified if investment in construction and extra right of way is less than either severance damages or the cost of acquiring the



affected property in its entirety. When more than 3 private access openings are located within the distance specified in HDM Index 104.3, a frontage road should be considered.

## **Project Development Process**

New interchanges on existing freeways must be documented by an approved PSR. New connections to existing expressways must be documented by an approved PSR-New Connection. The new connection must be covered by a Project Report and must have an environmental document under CEQA/NEPA, as appropriate. The local agency must submit to Caltrans a request by formal resolution with a firm funding commitment. After approval, the local agency must submit eighteen copies of the environmental document that covers the project for their new public road and the connection. See Article 4 for details. An encroachment permit is necessary for the construction contract, but by itself is unsuitable as an authorizing document for submitting a project to get CTC approval to connect a new public road to an expressway.

## **Public Road Connection Widths are Not Specified**

Private access openings have specified widths that are incorporated into deed descriptions. However, when the CTC grants a public road connection, it is practice to not specify a width of opening. The width matches the proposed local road right of way or at least the roadway opening. If the local road is subsequently widened, the width is adjusted to fit the new plan without further CTC action. A private access should not be submitted as a new public road connection for the sole reason of avoiding deed descriptions.

## **Existing Road as Frontage Road**

If a new local road or street is to be connected to an existing highway that is clearly to remain as a frontage road after construction of the freeway, the connection does not need CTC approval. The connection will be handled by the usual encroachment permit process. The permit should note the same points and conditions noted for theoretical connections as described in Article 3.

## **CTC Imposed Conditions**

The CTC, in its discretion, may require that construction of the public road start at the time Caltrans grants a permit for its connection to the State highway. The CTC may also impose the condition that a new connection authorization can become void if construction of the public road is not undertaken within a specified time period.

## **Private Roads and "Stubs"**

A "private road" connection to the State highway is any connection other than a "public road" connection (see Article 1 for a detailed discussion of "private road" versus "public road"). Private road connections are handled as right of way transactions, to be processed through the CTC via Director's Deeds. See Chapter 26, Article 2.

## **Public Road Maintenance**

Not all "public roads" as defined are maintained by a city or county government. This usually occurs along expressways in sparsely populated rural subdivisions where the developer is required to dedicate and construct public streets but a property-owner association or assessment district is expected to maintain the road. In these cases, it is required that all such public road connection requests be made by a city or county government and for the local agency to maintain the connection and public road at least within the State right of way. Thus, the State has a responsible party to deal with. The connection is further formalized by inclusion in the required superseding controlled access highway agreement.

## **"Other Public Agency Highway of Any Kind"**

Exceptions may be allowed in unusual circumstances if the local agency objects to maintaining the connection and public road, particularly if a private opening to an expressway already existed whose continued use for new development would be incompatible with safety or operating standards. In such a case, CTC approval would be requested as an "other public highway of any kind" (S&H Code Section 100.2) but there would be no controlled access highway agreement with the affected city or county. The CTC resolution would cover any needed ownership, maintenance, or control provisions which will also be included in the encroachment permit.

## **Other Public Agency Road Connections**

A different example of a "public road" that is not a city street or county road would be a road facility constructed by other public agencies to serve the general public. Examples are roads under the jurisdiction of the U. S. Forest Service, the National Park Service, the State Department of Parks and Recreation, etc. Caltrans will negotiate directly with these agencies but overall processing (including CTC approval) is essentially the same as for city streets and county roads, except that a freeway (controlled access highway) agreement is not required.

## **Violations of Private Access Openings to Expressways**

Existing private access openings to expressways are sometimes misused. This usually occurs when land uses change from agricultural to urban or suburban. An opening that originally served one owner now serves several owners due to parcel splits.

In such an instance, residential, commercial, and industrial development may have occurred that impairs the safety and operational capacity of the private connection. More often than not, the owners have widened the driveways to widths greater than the legal

opening (without permits) and the driveways become *de facto* public streets. Once in place and allowed to stay a number of years, it is questionable whether the Department would be successful in litigating removal of the unauthorized driveway improvements.

The districts, particularly through their maintenance superintendents, must take all reasonable measures necessary to protect the integrity of access control. An alternative, where the "driveway" extends some distance from the expressway, is to encourage the affected local agency to work with the property owners to develop a *bona fide* public road under the jurisdiction of the local agency with new connection approval by the CTC. This alternative must be compatible with future improvement plans for the expressway. Another alternative may be for the affected local agency to develop a frontage road or a local road network that connects to another public road.

### **Consider Future Land Use in Initial Design**

To avoid the access violation problem described above, the initial expressway could be designed to accommodate the most probable future land-use changes with planned access openings and frontage road provisions, after thorough evaluation of the most likely development adjacent to the facility. An option that can be considered is to acquire frontage road right of way (or a wide main line right of way) but permit interim private access directly to the expressway to avoid excessive severance damages and frontage road costs. When development does come, the rights of way for the solution will be available.

## **ARTICLE 3 - Approvals**

### **Local Construction Prior to Freeway Agreement**

If a new local road or street is to be constructed across the adopted freeway route prior to freeway construction, a theoretical connection is created with the freeway regardless of whether proposed future development provides for a separation or a closure.

CTC approval is not required for a theoretical connection but the local agency must still make a formal request to Caltrans. The following notification procedure will be followed.

#### **Theoretical Connection – Formal Notice to Local Agency**

Upon receipt of a formal resolution requesting approval to construct a road across the adopted freeway alignment, a formal notice must be given by the district to the local agency, which covers the following points and considerations:

- The name of the street and the location by kilometer post (post mile).
- State the date on which the CTC adopted the freeway route and that the construction of the local road prior to freeway construction does not create any special obligation on the State's part to later carry this road across the

freeway, connect it to the freeway or to make provisions for the traffic that will be carried on the local road.

- Quote the fact that there can be no physical connection of the local road with the freeway unless the CTC formally approves the connection first.
- State that Caltrans cannot execute a Freeway Agreement showing a connection of the local road with the freeway without first obtaining CTC approval of the connection.

One copy of each formal notice is to be forwarded to the Design and Local Program (DLP) Program Manager, Attention: New Connection, for information and files.

### **CTC Approval Not Required:**

No CTC approval is needed for the following conditions:

#### **Existing Road as Frontage Road**

If a new local road or street is to be connected to an existing highway that is clearly to remain as a frontage road after construction of the freeway, the connection does not need CTC approval. The connection will be handled by the usual encroachment permit process. The permit should note the same conditions noted for theoretical connections.

#### **No CTC Approval for Crossing with Separate Grade**

If the new road will not be "opened into or connected with" the freeway but will merely cross at separated grades, CTC approval is not required since S&H Code Section 100.2 is considered to apply only to openings or connections at grade. However, a superseding Freeway Agreement must be executed.

#### **Unconstructed Freeways**

For unconstructed freeways, city streets, or county highways that are in existence at the time of the freeway declaration (also referred to as "freeway adoption") may be approved for connection to a freeway through negotiation between Caltrans and the local agency, without obtaining the consent of the CTC. This is true whether or not the alignment of the route adoption is intersected by the existing local road.

#### **Closure of a Connection**

Closure of a connection does not require CTC approval (but a Superseding Freeway Agreement is required).

## **Early Confirmation of Feasible Proposals**

Early in the process, the local agency should be given a written response that the proposal meets new public road connection policy (see Article 2). If requested, the Project Development Branch of DLP will provide the District Director with advice on a new road connection that potentially might be considered a "stub" connection.

## **CTC Approval Required:**

CTC approval of a new public road connection is required under any of the following circumstances:

### **Connection as Part of Initial Construction of Freeway /Expressway**

CTC approval is required for an interchange or at-grade connection with a new city street or new county road that was not in existence at the time of the freeway adoption, but which is to be included with the construction of a new freeway or expressway. However, the CTC consents to a new connection if it takes action on a project that includes the new connection, such as a project that requires CTC adoption of a change in route location and the connection is covered by the environmental document.

### **New Connection to Existing Freeway or Expressway**

CTC approval is needed for any new public road connection (interchange or at-grade connection) to an already constructed freeway or expressway. If ramps are to be added at an existing overcrossing or undercrossing, CTC approval is required. An existing partial interchange, with at least two ramps providing access to both directions of the freeway, does not require CTC approval for the construction of additional ramps, since public access to and from the freeway has already been furnished.

### **Access Break**

As a general rule, CTC consent is required where access control has been acquired and the new public road will involve a break in the access line. For illustrations of cases that do and do not require CTC consent, see Figures 1 through 5 (3-120).

### **Private to Public Road**

Conversion of an existing private access opening to a public road connection requires CTC approval.

### **Temporary Connection**

CTC approval is required for a temporary connection of a new city street or new county road to a freeway or expressway. The CTC resolution of consent may be worded to put the local agency and adjacent property owners on notice that the connection is temporary and may be closed at the time of further freeway construction or closure must be completed by a specified date.

### **Reconnecting a Previously Closed Connection**

Reconnecting a previously closed connection to a constructed freeway also requires consent of the CTC.

### **Private Road Connections are CTC R/W Transactions**

Private road connections to an expressway — or through access control lines to a road that crosses the freeway — are handled as right of way transactions, to be processed through the CTC via Director's Deeds. See Chapter 26.

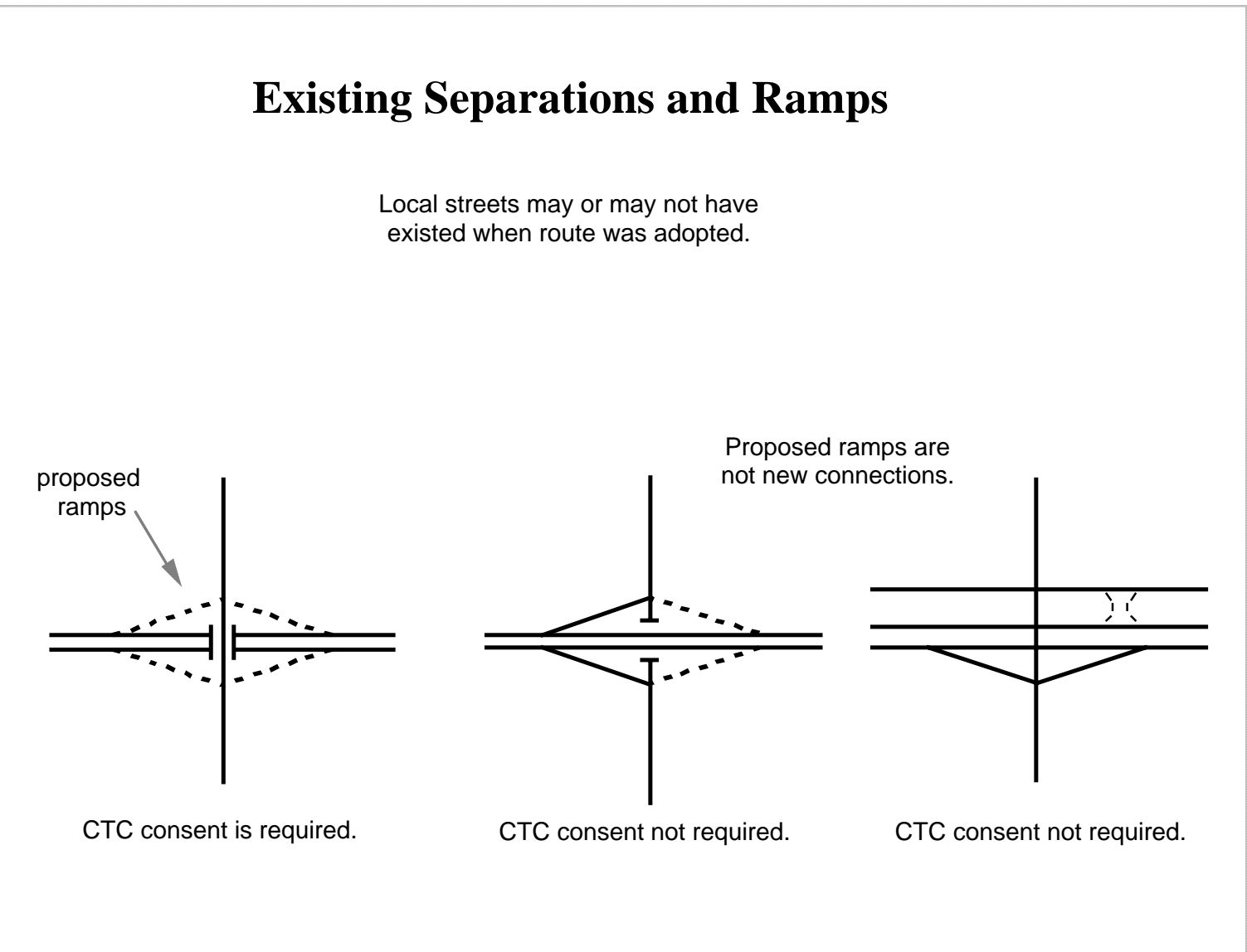
## **New Connection Report on Expressways**

Requests for all proposed new public road connections to expressways must be given early written confirmation or refusal by the District Director. The District Director approves the concept by consideration and approval of a PSR-New Connection. If DLP advice on "stub" connections is requested, two copies of a draft report are to be submitted to the DLP Program Manager, Attention: New Connection. The PSR-New Connection contains information to justify engineering aspects. It would also contain the following locally supplied information, as appropriate:

- Description of the land-use development to be served by the new connection with appropriate maps.
- Relationship to the local agency's General Plan or other specific area plans.
- Status and discussion of the environmental document. If a local agency EIR or ND has been completed, reference should be made to the ED and the Notice of Determination that was filed with OPR.
- Rationale for obtaining (or foregoing) compensation; or recommendation of acceptable alternatives or denial of the new connection request (public or private).
- Recommendation for traffic-impact mitigation measures, if any.
- An approximate estimate of the amount of compensation where compensation is recommended for value enhancement.

Two copies of the request to the District Director and subsequent decisions and approvals should be forwarded to DLP, Attention: New Connection, for information and files.

FIGURE 1 - Existing Separations and Ramps



**FIGURE 2 - Existing T-Intersection at Grade: Convert to crossroad.**  
Existing T-Interchange: Add crossroad to other side.

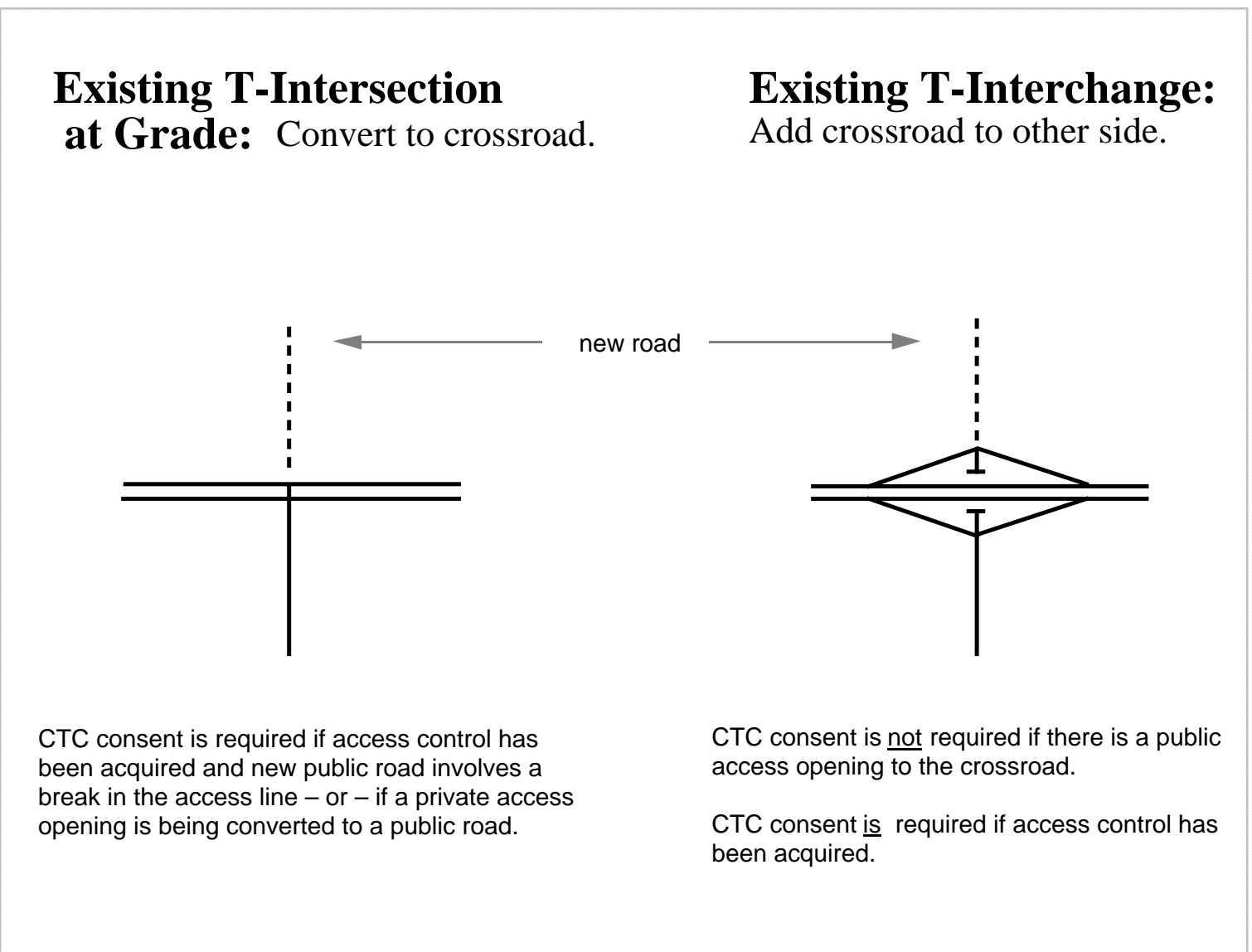




FIGURE 3 - Existing Interchange

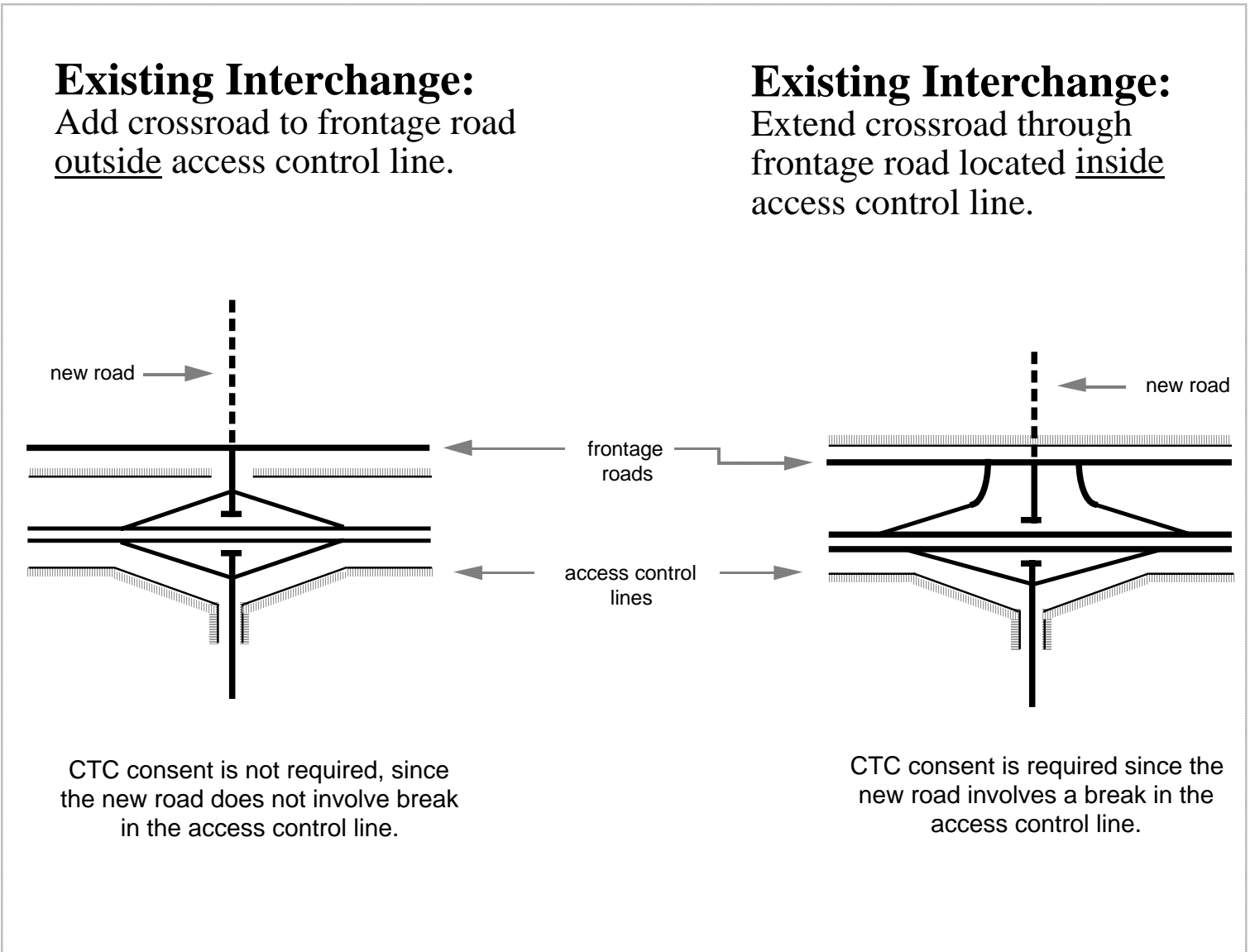


FIGURE 4 - Convert Existing Diamond to Split Diamond

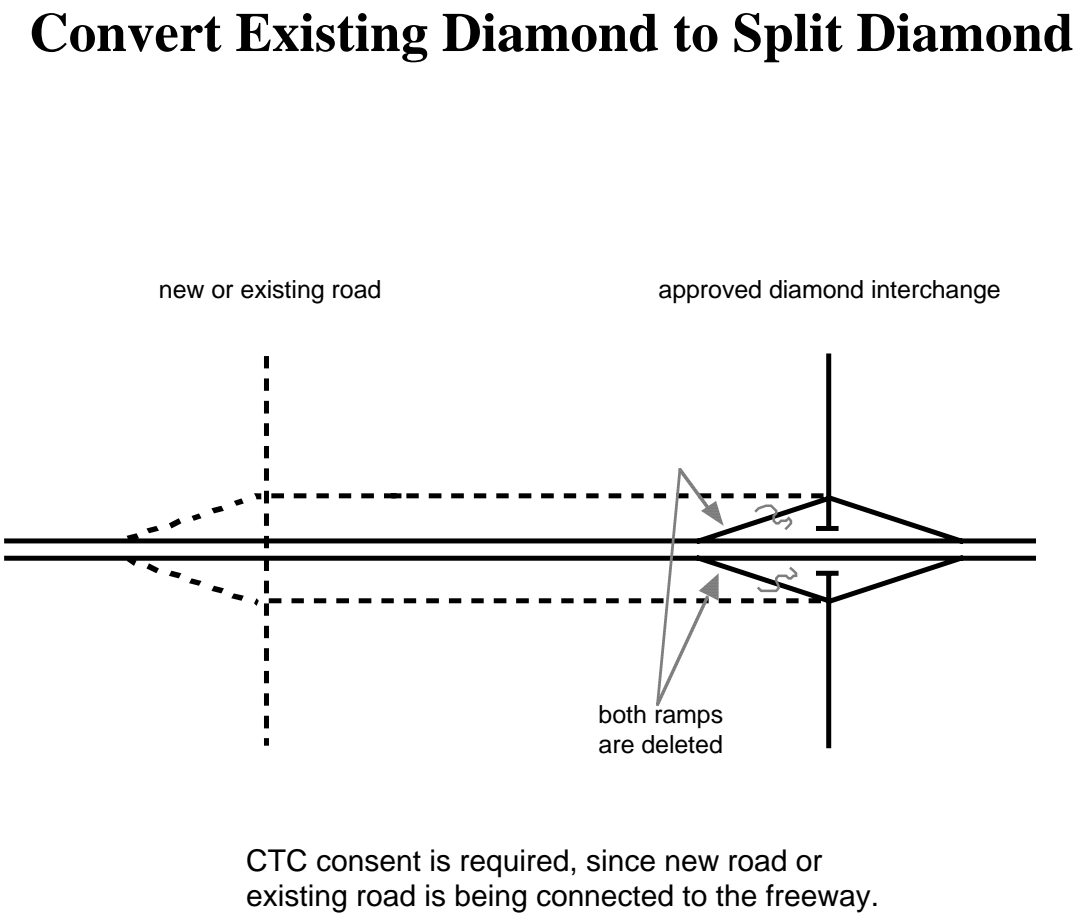
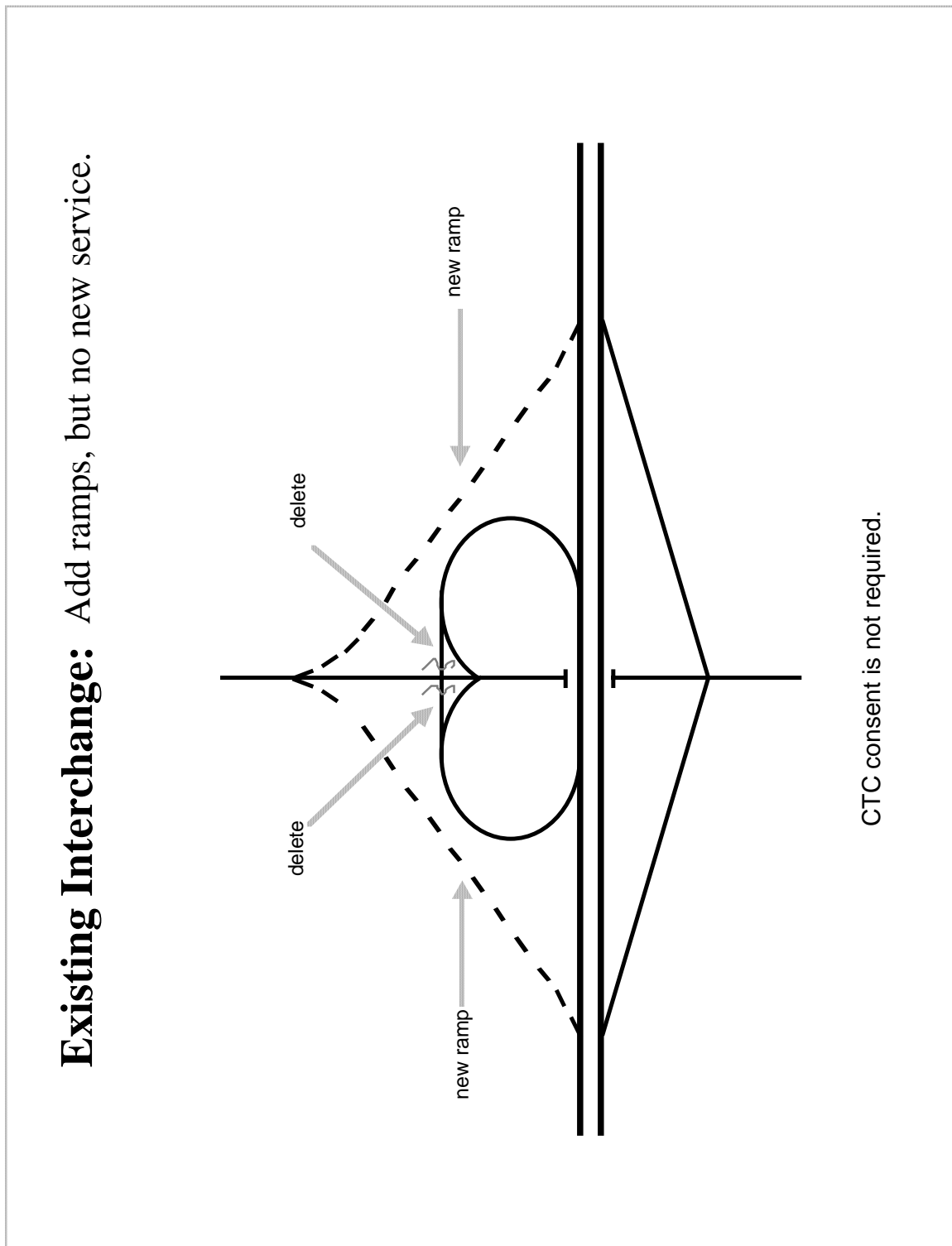


FIGURE 5 - Existing Interchange: Add ramps, but no new service



## **New Connections to Freeways**

New connections to freeways require a PSR to initiate the project. Negotiations with the requesting local agency are conducted considering the CTC funding policy adopted April 26, 1984. The local agency usually introduces the proposal through informal discussions followed by a formal resolution requesting the connection which also gives a firm funding commitment for the local share. The FHWA must give conceptual approval to a new connection to an Interstate freeway prior to PSR approval, or if PSR approval must be given first, it will be on an at risk basis and subject to FHWA conceptual approval (see Article 5). At the end of the project development process, after approval of the PR, DLP submits a report to the CTC for approval of the new connection.

## **ARTICLE 4 - Steps to CTC Action on a New Connection**

### **Follow Regular Project Development Process**

Locally funded, new interchanges on existing freeways must be initiated by an approved PSR. A proposed new public road connection to an expressway must be initiated in a PSR-New Connection. After a proposed new connection is given early written confirmation by the District Director, the project development process is followed. The new connection must be covered by a PR and must have an environmental document under CEQA/NEPA, as appropriate.

A Permit Engineering Evaluation Report (PEER) is unsuitable as an authorizing document for a project to connect a new public road to an expressway due to processing requirements for getting CTC consent.

### **Engineering Feasibility and Financing**

As an initial step, the district and the local agency/developer meet to evaluate the engineering feasibility and likelihood of construction financing. The local agency resolution requesting approval of the new connection and making a funding commitment is usually deferred until the PSR stage. The initial discussions should confirm that there are no obvious engineering or financial conditions that would preclude proceeding with the necessary studies and processing.

### **Request to CTC**

After project approval, DLP prepares Caltrans' report requesting CTC approval of the new connection. At this stage, the local agency has executed a Freeway Agreement (or controlled access highway agreement), with provision for the new connection. Execution of the agreement by the State is withheld until after CTC approval.

## **CTC is Responsible Agency Under CEQA**

In approving new connections, the CTC acts as a Responsible Agency under CEQA and must review the Lead Agency's document and make findings, if necessary, prior to reaching a decision.

When Caltrans is Lead Agency, project approval procedures will be followed. When a local agency is Lead Agency, 18 copies of the environmental document, a copy of the Notice of Determination (NOD) that was filed with OPR, and the local agency's findings, if prepared, are needed by the Environmental Program to send to the CTC. (See *Environmental Handbook*, Section 4-6.3 for additional requirements.) If a local agency desires to add a new connection to a State highway project on which Caltrans is the Lead Agency and if that connection is not part of the Caltrans project, then the local agency must provide the documentation required as the Lead Agency for the new connection.

## **Expressways**

New connections to expressways are the responsibility of the involved local agency. See Chapter 2, Section 5, for funding responsibilities. The procedures to be followed are outlined in Article 3 of this chapter, as well as direction for preparing the PSR-New Connection.

## **New Freeway Interchanges**

Where a proposed new interchange is to be locally funded, the first step is preparation of a PSR (see Chapter 9 and Appendix L). A formal funding commitment (usually a resolution) by the local agency is required at the time of PSR approval. Funding responsibilities are described in Article 6 and in Chapter 2, Section 5.

## **Inclusion of New Interchange with State Proposal**

There may be cases where the local agency new connection request can be incorporated into proposed new freeway construction. The requirements for PSRs, PRs and other processing steps must be individually determined by discussion between the district and the PD Coordinator.

If the PR for the parent freeway project is yet to be developed, the new connection request can usually be added to the PR prepared by the district. If project development has reached the design phase, it is likely that a Supplemental PR would be necessary and would be the responsibility of the funding party.

## ARTICLE 5 - Approval of New or Revised Interchanges

### Application

This Article applies to proposals for:

- New interchanges
- Modifications to existing interchanges involving access control revisions for new ramps or the relocation or elimination of existing ramps
- Projects to increase mainline capacity when existing interchanges do not meet HDM interchange spacing requirements

Projects which involve freeway access control revisions related only to ramp or local street widening (typically ramp metering and signalization projects) are not subject to these requirements.

### Conceptual Approval Conditions

Caltrans grants conceptual approval of new or revised interchanges with the approval of the PSR. Before investing significant effort toward PSR preparation, it is important to understand that the following conditions must be satisfied where applicable before new or revised interchanges are considered for conceptual approval in a PSR. These conditions must be considered and satisfied even if CTC new public road connection approval is not required:

#### **Interchange Justification**

It is demonstrated that the existing interchanges (for new interchange proposals) and/or local roads and streets in the corridor can neither provide the necessary traffic service nor be improved to satisfactorily accommodate the design-year traffic demands.

#### **Consideration of Alternatives**

All reasonable alternatives for design options, location and transportation system management type improvements (such as ramp metering, mass transit, and HOV facilities) have been assessed and provided for if currently justified, or provisions are included for accommodating such facilities if a future need is identified.

#### **Interchange Spacing**

The proposal must comply with the spacing requirements of the HDM. (Design Information Bulletin No. 77 dated January 31, 1995, should also be consulted.) If not,

written approval of a design exception for the proposed deviation must be requested and obtained before the project is given conceptual approval in a PSR.

#### **No Significant Adverse Impact**

The proposed interchange does not have a significant adverse impact on the safety and operation of the highway facility based on an analysis of current and future traffic.

#### **Connection to Public Road**

The proposed interchange connects to a public road only and will provide for all traffic movements.

#### **Meets Local Planning**

The proposal considers and is consistent with local and regional land use and transportation plans.

#### **Coordination With Development**

The request for a new or revised interchange generated by new or expanded development demonstrates appropriate coordination between the development and related or otherwise required transportation system improvements.

### **PSR Content**

The contents of the PSR must address the following items under the appropriate headings in the PSR Outline:

- Purpose of the project
- Description of existing and proposed interchanges, including:
  - Configuration (including adjacent interchanges)
  - Distances to and projected impacts on adjacent interchanges
  - Freeway mainline and crossroad traffic volumes [ADT and DHV] including turning movements for current year, implementation year, and design year (20 years from implementation year)
  - Number of mainline and crossroad lanes; include auxiliary lanes or collector-distributor roads
- Description of alternatives that have been considered; analysis to support the conclusion that the existing interchanges and/or local roads cannot handle the expected traffic, provide access, or be improved to do so, including a cost effectiveness analysis

- Accident data analysis
- Traffic and operational analysis for existing and proposed conditions; including an analysis of adjacent segments of the freeway as well as nearby existing and proposed interchanges. The results of operational analyses (with or without ramp meters operating) must demonstrate the adequacy of:
  - Freeway mainline capacity
  - Freeway weaving
  - Ramp merging capacity
  - Freeway diverge
  - Ramp intersection capacity
  - Crossroads and other local streets ability to effectively collect and distribute traffic from the new or revised interchange

The items to be addressed in the PSR should be determined in consultation with the PD Coordinator. Proposals for new or revised interchanges in metropolitan areas need a greater level of detail than that required in remote rural areas.

### **Exceptions to Spacing Requirements**

Requests for exceptions must be made in accordance with the current process used for mandatory design standard exceptions (see Chapter 21), with necessary variations made to accommodate the unique information required to justify interchange spacing exceptions.

Not all sections of the Exceptions to Mandatory Design Standards Fact Sheet outline (see Appendix BB) are relevant to interchange spacing cases; and therefore, these may be omitted (if no other nonstandard feature is discussed). However, the information items listed above under "PSR Content" must be addressed and incorporated into the Fact Sheet, preferably as an attachment. It is also preferred to cover all other nonstandard features in the same Fact Sheet.

Questions on the content and format of the Fact Sheet should be discussed with the PD Coordinator. If FHWA Conceptual Approval is required, the Fact Sheet should be used as part of the written request for approval.



## **Interstate Freeways**

Prior to Caltrans approval of a PSR, FHWA conceptual approval for new or revised interchange proposals on the Interstate system must be requested by the district. If the PSR must be approved prior to FHWA's conceptual approval, such approval will be on an at risk basis and subject to such FHWA approval. This approval request should be accomplished by forwarding three copies of the final draft of the PSR and any pertinent Fact Sheets with a letter requesting conceptual approval to the Division Office of FHWA. In most cases, the FHWA Division Office submits the package to higher levels in FHWA for approval. This additional processing should be considered in project scheduling.

This conceptual approval is subject to completion of the normal project development process. At the completion of project development, the FHWA formally gives final approval of the design features of the new interchange by issuing a Finding of No Significant Impact (FONSI), or by approval of the Record of Decision (ROD) following completion of an EIS.

A copy of the request for FHWA approval and subsequent decisions are forwarded to the DLP Program Manager, Attention: FHWA Access Approval, for informational use and reference in preparing any required new connection request to the CTC.

## **Right of Way Changes**

Interchange projects usually involve changes in right of way and access control. Refer to Chapter 26 for required FHWA approval for disposal of right of way.

# **ARTICLE 6 - CTC Funding Policy for Interchanges**

## **Purpose of Policy**

On April 26, 1984, the CTC adopted the policy for funding interchanges and crossings of State freeways. The policy establishes the maximum State responsibility and the minimum local-agency responsibility (or private entities working through the local agency) for funding proposed construction of new interchanges and new crossings, or modifications to existing interchanges. Local commitments above the minimum responsibility enhance a project's prospects for programming.

In 1990, State Transportation Blueprint legislation was passed that allows greater flexibility in the use of State funds by local agencies on local road systems. Local agencies are not specifically prohibited from using these Flexible Congestion Relief (FCR) funds on a new connection.

However, the CTC intends to use the Policy for Funding Interchanges and Crossings as a guide in prioritizing interchange projects for programming. If a district does not follow the policy, the CTC may be reluctant to program the project, and the project may therefore be subject to delay.

## **General CTC Interchange Funding Policy**

A general interpretation of the CTC Policy as applied to new public road connections will be given here. The *Manual for Applying the California Transportation Commission's Policy Guidelines for Funding Interchanges and Crossings* (Cost-sharing Manual) should be referred to for specific details (printed in April 1984, reprinted February, 1989).

- Purpose – The policy affects all new interchange projects and new crossing projects on freeways, and major interchange modification projects. The policy provides that cost sharing is determined on analysis of existing congestion and accident conditions.
- Documented commitments – made prior to April 26, 1984, are unaffected by the Policy. However, the only prior commitments that may still be in effect are on Freeway Agreements executed before April 26, 1984.
- State pays – 50% of cost to add pedestrian/non motorized crossings of existing freeways; local agency share is 50%.

State pays – 100% of cost of new or improved interchanges between two State highways. When a new freeway is constructed or existing freeway is upgraded, 100% of cost to upgrade existing local road interchanges.

- Cost sharing analysis – The policy provides that cost sharing is determined on analysis of existing congestion and accident conditions. A problem level ranking is required of conditions (congestion and accidents) into "high", "moderate", or "low" problem levels. The thresholds for the levels are incorporated into the policy and are subject to review every two years. Caltrans is responsible for doing the analytical procedures described in Sections V and VI of the Cost-sharing Manual.
  - Exhibit I in the aforementioned manual shows that when the congestion or accident problem is high, the State pays 100%.
  - Exhibit II in the aforementioned manual shows how new interchanges and new or modified crossings are evaluated on the basis of a surrogate site, to determine the State share, normally limited to 50%. Exceptions are allowed for State share up to 100%.
- Staffing – On projects funded 100% by a local agency, Caltrans does the preliminary engineering up through PSR approval (or through Project Approval, if the project is sales-tax funded). The local agency pays for

everything else (including contract administration by Caltrans). See Chapter 2, Section 5, of this manual. When costs are shared, staffing costs are shared in the same ratio as cost sharing for right of way and construction (capital outlay). Caltrans usually provides staffing if the State's share is more than 50%. Caltrans will negotiate if the share is less than 50%.

- CTC Exceptions – The CTC is the final arbitrator on issues concerning costs. The CTC may be asked to increase the State funding share.

## **Priority Versus Cost Sharing**

Priority setting and interchange cost sharing methodology are separate processes serving different policy objectives. Priorities are set by a ranking of similar projects based on costs and benefits over an analysis period of 20 years.

The priority index calculation is based on a Safety Index (SI), a Delay Index (DI), and the location of the interchange in relation to adjacent interchanges. Except for projects in a RTIP, only current interchange problem locations are prioritized and programmed.

Unprogrammed interchange projects (HE-11 program) require a cost-sharing analysis before the project is prioritized, but only "current problem" projects are prioritized. "Current problem" is defined as 50% or more State participation (existing interchanges use Cost-sharing Manual Exhibit I) or 25% or more State participation (the proposed interchange uses the adjacent interchange values as surrogates in Cost-sharing Manual Exhibit II) of the cost-sharing analysis. Interchange project priorities are advanced based on committed local funding shares exceeding the above funding criteria.